

December 2025

7th Edition

# SWR

*Magazine 1:1*

ISSN: 3068-7233

## POTA

WHERE NATURE  
MEETS RADIO

## NO YARD, NO PROBLEM

THE SPACE-LIMITED RADIO  
AMATEUR

## TX-500MP

THE EXPEDITION COMPANION  
YOU CARRY IN YOUR BACKPACK

## DIY Vertical Antenna

RECIPE FOR A GREAT  
PORTABLE ANTENNA  
FROM 6 M TO 80 M

## BAOFENG

REVOLUTION OR RISK IN  
AMATEUR RADIO?





## Introduction

# On the Cover

As we gaze upon the illustration on our Christmas cover, Santa Claus flying in his sleigh with reindeer under a snowy sky, his sack overflowing with Yaesu, Icom, and Flex radios, a tower antenna, and himself holding a microphone to call "CQ DX" with a smile, we step not only into a playful symbol of Christmas, but also into a profound reflection of what this year-end means to us, amateur radio enthusiasts.

That magical bag of Santa's doesn't carry traditional toys: it carries transceivers, radio equipment, dreams, and passions. The tower peeking out among the packages represents our antennas: bridges that lift our signals toward the sky, toward the luminous and expansive void, to connect with friends on solid ground or on distant islands.



And that microphone in hand, that call of "CQ DX," is the echo of our vocation: to make contact, to reach the distant, not just as a technical exercise but out of a genuine desire to weave community through the airwaves.

This time of year has a special flavor for us. Christmas and New Year's are moments for reflection: we look back with gratitude for the QSOs made, the DX stations worked, the contests experienced, and also with nostalgia for colleagues who may no longer be on the air as before. It is a time for introspection, family gatherings, rest, but also preparation for what lies ahead.

And what a year it has been for the world of amateur radio. Throughout 2025 and now entering 2026, we have witnessed very significant milestones.

May this festive image also serve as a reminder of what drives us: camaraderie, curiosity, service—because many hobbyists are also emergency operators, educators, and mentors. And just like Santa, who never forgets a reindeer or a chimney, may we never forget our mission: to stay on the air, vibrant, calling CQ, and weaving networks of friendship across the spectrum.

From this magazine, we wish you a Merry Christmas, filled with peace, laughter, and good signals. May the coming year bring us many "73s" (best regards), many contacts, and new adventures on the bands. Santa has already loaded his sleigh with radios; now it's our turn to raise our antennas and keep calling the world!





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Amateur radio is that ancient echo that never dies: a bridge built of signals and silence, where every QSO carries the voice of someone who may no longer be with us, but who left their mark on the ether.

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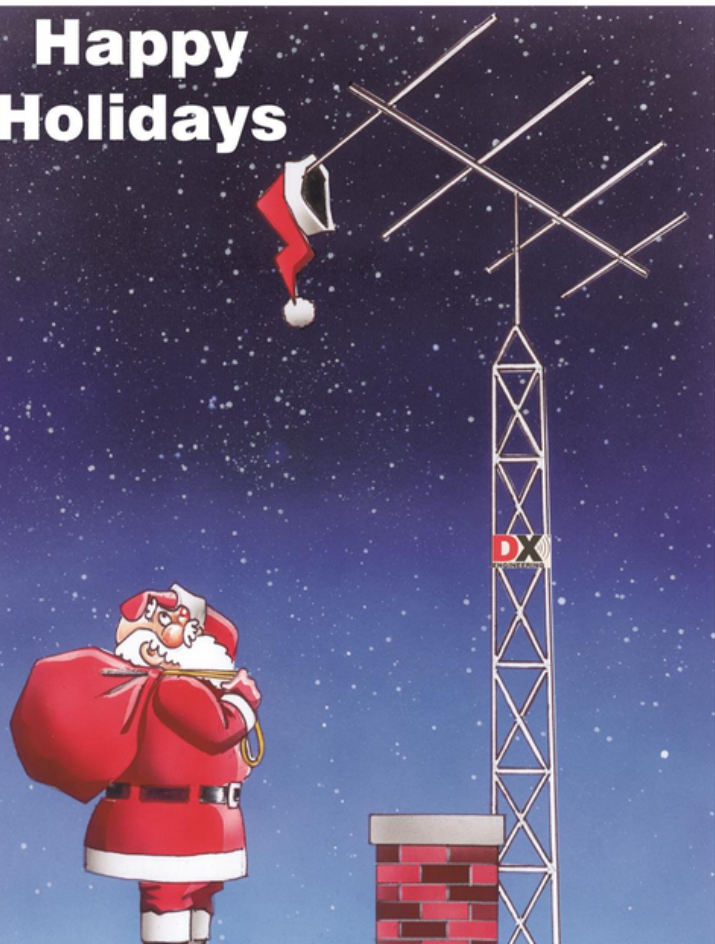
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**Happy  
Holidays**





# EDITORIAL

## SWR: A DREAM THAT CROSSES BORDERS

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December always brings with it the closing of a cycle, a moment to look back with gratitude and forward with hope. In SWR Magazine, this edition takes on a special meaning: we celebrate our seventh publication, a milestone that, although born from high expectations and the firm desire to offer the best, has far exceeded everything we imagined. When we took the first steps with this magazine, we never imagined it would go this far. Today, SWR is read all over the world, both in English and Spanish, and this is possible thanks to a vibrant community of readers and contributors who share our passion for amateur radio, experimentation, and borderless communication. Their enthusiasm has turned this project into something much bigger than a magazine: into a living, global, and ever-growing space.

In this December edition, we maintain our usual sections, but we also bring new features, including the arrival of new contributors whose voices and expertise will further enrich our pages. Every contribution counts, every story inspires, and every perspective opens new paths for everyone.

December also offers us the perfect opportunity to celebrate the holiday season. Amid projects, antennas, DX, experiments, and adventure, we take a pause to appreciate the community we have built together: diverse, curious, passionate, and united by the same invisible thread that spans the world through waves and frequencies.

Finally, we extend an open invitation to anyone who wishes to join as a contributor. If you have a story, an experiment, a field experience, a reflection, or a technical contribution you want to share, now is the time. Send us your submission and become part of the SWR Magazine family.

Thank you for accompanying us through these seven editions. May this Christmas be filled with peace, creativity, and new connections, and may the coming year find us with more projects, more voices, and more stories to tell.

Happy holidays and happy reading!

— Editorial Team of SWR Magazine





# WORLD NEWS

## SUCCESSFUL LAUNCH OF THE AMATEUR RADIO SATELLITE CEVROSAT-1

The organization AMSAT announced that on November 2, 2025, SpaceX launched the Bandwagon-4 mission carrying a set of satellites, including CEVROSAT-1, developed by CEVRO University in the Czech Republic in collaboration with the Brno University of Technology. CEVROSAT-1 is a 48-kg microsatellite equipped with an FM voice repeater (G3RUH, 9.6 kbps GFSK) and AX.25 telemetry on 436.025 MHz, coordinated by the IARU.

After deployment, amateur radio operators from various countries reported receiving telemetry signals and digipeated packets, generating excitement for its operation. This mission represents a significant contribution to the global amateur satellite program, expanding opportunities for space communication for operators across different regions.

## ARRL VEC READY TO SUBMIT 2,500 APPLICATIONS; FCC EXTENDS RENEWAL DEADLINE



By: <http://arrrl.org/>

The ARRL Volunteer Examiner Coordinator (ARRL VEC) announced that it has over 2,500 license applications ready to submit to the FCC, following delays caused by the recent U.S. federal government shutdown. The high accumulated volume reflects both current demand and interruptions in processing systems.

As a relief measure, the FCC has extended the renewal period to March 5, 2026, for licenses expiring between October 1, 2025, and March 5, 2026. This applies to amateur radio, aircraft, marine, GMRS, and commercial licenses.

ARRL VEC Manager Maria Somma (AB1FM) reminded operators whose licenses fall within this period that they may continue to operate legally while their renewal is pending in the system. She also emphasized the importance of keeping each applicant's FRN and CORES registration up to date to streamline the process once the FCC fully resumes operations.

The ARRL VEC continues processing and submitting applications daily, working to reduce the backlog and ensure that the amateur radio community maintains uninterrupted access to the spectrum.





Photo by: [pota-jp.com](http://pota-jp.com)E

# POTA: WHERE NATURE MEETS RADIO

By: Jose M. Candelaria NP4ET

## **An Adventure You Can Feel, Hear, and Remember**

There are moments when radio leaves the walls of the shack and breathes fresh air. Moments when the waves travel not just between antennas, but among trees, mountains, rivers, and vast open skies. Amid all this landscape, an experience emerges that has captured the imagination of thousands of operators around the world: Parks on the Air, POTA.

You don't need a personal story to feel what POTA means. Just imagine yourself there, walking along a narrow trail where the damp grass brushes against your boots and the scent of fresh earth signals that the adventure is just beginning. You hear the crunch of dry leaves beneath the tripod, the metallic click of a telescopic antenna extending, the brief hum of a portable rig powering on. In that moment, nature and radio shake hands.





Photo by: onallbands.com

## An Emotion That Begins Even Before the First CQ

The first thrill arrives even before calling. It's that little suspense, almost childlike, that appears while setting up the station: Will the dipole work between these trees? Will there be enough propagation? Will anyone respond from some distant place?

And then the moment comes. The operator—anyone, everyone, any one of us—adjusts the frequency, takes a deep breath, and sends a simple:

"CQ POTA, CQ POTA..."

It's not a shout into the void; it's an invitation. An open door to distant voices traveling with stories, accents, and enthusiasm. Each reply is like finding a light burning in the middle of the night.



Photo by: onallbands.com

## The Magic of Connecting Worlds from a Wooden Bench

In a park, radio changes. Every contact has a different flavor. The volume of the river blending with the static.

The wind crossing the antennas as if it also wants to transmit. The distant echo of footsteps on the path while a voice on 20 meters says: "Thanks for the activation. Great job from your park."

There is something deeply nostalgic in that. It evokes the first portable radio experiences from decades ago, the heavy batteries, the improvised wires, the thrill of hearing a weak signal strengthen just before fading away. POTA captures that essence, revives it, and shares it with a community that understands that every contact is more than a signal report: it is a conversation between two worlds.



Photo by: onallbands.com



**Nature and Radio: An Alliance That Transforms**  
Anyone participating in an activation doesn't just bring a radio: they bring a desire to discover.

To walk a little further.

To listen a little closer.

To appreciate the stillness of the park as if it were an operating partner. Because amid nature, every operator becomes an explorer. And every park, no matter how small, transforms into a station full of possibilities. Squirrels watch with curiosity the wires hanging between trees. A group of hikers stops to ask if "they're looking for extraterrestrial life." The sky changes color as the logbook fills with call signs. The battery warns it's running low, just as propagation improves. And all of that, far from frustrating, feels like part of the experience. POTA doesn't seek perfection; it seeks experience.

### **A Community That Beats in Unison**

The truly beautiful part of the program is knowing that, at the other end of the airwaves, there are other operators listening, ready to respond, support, encourage, and give thanks. A community that celebrates every activation as if it were the very first in the world.

It doesn't matter whether the park is a vast forest, a coastal reserve, a quiet valley, or a small green space in the heart of a city; the excitement doesn't change. What is experienced in POTA unites generations: from those who grew up with analog equipment to those who today transmit from a QRP rig the size of a mobile phone.



Photo by: onallbands.com

### **A Closing That Always Invites a Return**

When the antenna is taken down and the last QSO is logged, something lingers in the air. It's a warm feeling, a mix of satisfied fatigue and quiet joy. You take one last look at the park, knowing it was more than a setting: it was part of the contact.

The echo of the final "73" resonates as the sun begins to set. And even though the equipment is packed away, something remains active within the operator: the certainty that they will return. To that park, or to another. But they will return.



Photo by: hamstuffonline.com.

### **Because POTA is not simply a program.**

It is a way to live radio.

A way to reconnect with what truly matters.

An excuse to explore, listen, and remember.

And, above all, it is an invitation to discover that the best signals don't always come through the headphones...

Sometimes they come from a forest, a breeze, or the simple joy of being there, present, amidst nature and the airwaves, letting the magic take its course.



# NO YARD, NO PROBLEM

By: Juan Monmtijo WP4OV



Photo by: onallbands

### Amateur Radio Doesn't Depend on Space, but on Ingenuity

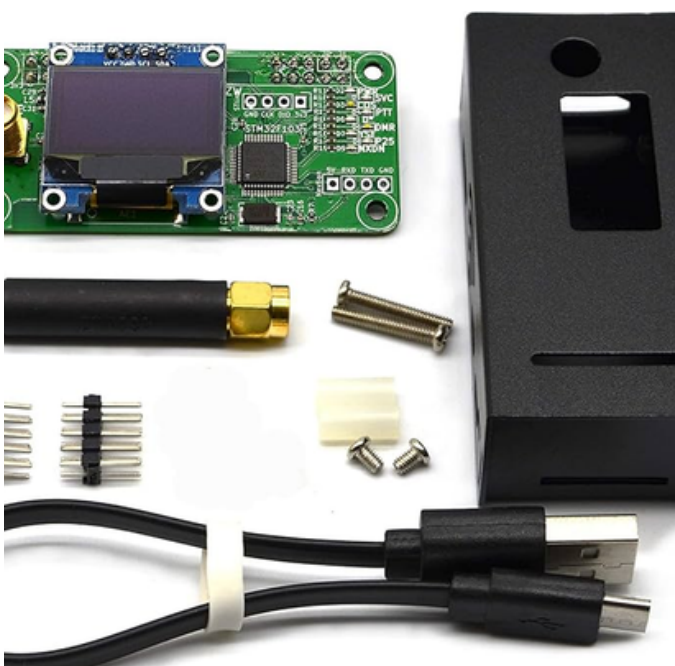
The other day, a good friend of mine, Angel, who has been helping us with ideas and the development of SWR Magazine's structure—and who, interestingly, is not a radio amateur—asked me a simple but very interesting question:

"If someone doesn't have a yard, does that mean they can't become an amateur radio operator?"

That question made me reflect. Many articles have been written about antennas for small spaces, but not so many for those who have no space at all, no yard, no roof, not even a balcony. However, the spirit of amateur radio has always been creativity, experimentation, and connection, regardless of limitations. So let's look at the options available for those living in apartments, condos, or places where installing external antennas is prohibited.

### 1. Handheld Radio – Your Gateway to the Airwaves

Let's start with the basics. A portable transceiver (HT), that small radio that fits in your pocket, can open up a world of local communications. With a good network of VHF/UHF repeaters, even a simple 5-watt rig can connect with amateur radio operators across the city or region. Adding a magnetic antenna near a window or a small external antenna discreetly placed on a railing can significantly improve the signal. Some repeaters are linked to EchoLink, which connects traditional radio with the Internet, allowing you to talk to stations around the world using just the HT and a local repeater.



"No matter if you live in an apartment, a small room, or a place with restrictions: amateur radio always finds a way. Where others see limitations, you can see opportunities to create, experiment, and connect with the world."



# The Space-Limited Amateur Radio Operator

## 2. The Digital Hotspot – Your Personal Gateway

For those who enjoy global communication, digital voice modes like DMR, C4FM (Fusion), D-Star, and AllStarLink are excellent options. A small personal hotspot connected to your home Wi-Fi allows your handheld radio to access digital networks without the need for an external antenna. You can communicate with the entire world from your living room, using your call sign and following all amateur radio rules. Devices like Pi-Star, OpenSpot, or ZumSpot are easy to set up and run on USB power.

## 3. Remote HF Operation – The World at Your Fingertips

No yard? No problem. Thanks to technology, you can now remotely operate a full HF station from your computer, tablet, or smartphone. Remote station rental services like RemoteHamRadio and HamSphere are available, and it's also possible to set up your own remote station at a friend's house using systems like RemoteRig or ICOM and Yaesu remote controls. This way, you can enjoy the full HF spectrum, from 80 to 10 meters, without installing a single antenna at home.



## 4. Magnetic Loop Antennas – Discreet and Efficient

If you still want to operate from home, magnetic loop antennas are ideal for small spaces. They are compact, quiet, and efficient enough to be placed in a living room, attic, or near a window. When properly built, they can cover 40 to 10 meters with careful tuning, delivering excellent results in digital modes, CW, or even SSB. Additionally, they are discreet, no one outside needs to know they're there.



"The true amateur radio operator is not defined by the size of their antenna, but by the size of their enthusiasm. Sometimes, a simple window and a piece of wire are enough to open up a universe of possibilities."

# The Space-Limited Amateur Radio Operator

## 5. Balcony, Attic, and Indoor Solutions

Those fortunate enough to have a small balcony can use a compact vertical antenna, an end-fed wire, or even a mast-style antenna. Attics can accommodate hidden dipoles, loaded whips, or loops, especially when combined with a good antenna tuner and proper grounding. Remember to use ferrite cores and baluns to prevent interference with household electronics.



## 6. The Magic of Digital Modes

When space or power is limited, digital modes like FT8, JS8Call, PSK31, or digital voice over IP are your best allies. They allow reliable contacts worldwide even with weak signals, proving that skill and technique matter more than power or size.



## Conclusion: The Spirit of Amateur Radio

Amateur radio has always been synonymous with creativity and adaptability. Whether from a mountain, a yard, or a small apartment in the middle of the city, radio always finds a way. So, answering Ángel's question: No, you don't need a yard to be an amateur radio operator. You only need a license, curiosity, and the desire to communicate with others. The airwaves belong to everyone, even those who have no space at all.

*"A small station is not a disadvantage; it's a laboratory. Every adjustment, every discreet antenna, and every experiment makes you a more creative, more resourceful operator, more connected with the essence of the hobby."*





# DXpeditions

DXpeditions are much more than simple radio operations; they are adventures that take amateur radio operators to the most remote corners of the planet, where nature imposes its challenges and technology becomes a bridge between cultures and continents. Every contact made from a distant island, a remote mountain, or a base in Antarctica represents the perfect combination of patience, skill, and passion.



01

In the 13th century, the Arawak tribe settled on the island, then known as Salt Island for its main resource. In 1493, Christopher Columbus arrived and named it Saint Martin Island, a date that is now celebrated as a national holiday.

In the 17th century, the French and Dutch colonized the island; the Dutch built Fort Amsterdam, and in 1633 it briefly came under Spanish control. After returning, the French and Dutch signed the Treaty of Concordia, assigning 53 km<sup>2</sup> to France and 34 km<sup>2</sup> to the Netherlands, making it the only place in the world where the borders of these two countries directly meet.

## 01.

### TO9W San Martin

The TO9W team will be active again from Saint Maarten Island, IOTA NA-105, from November 30 to December 12, 2025.

Team: W9MR, W9AP, K9EL, N9LQ, K9KE

Latest DX Spots: TO9W

They will operate on bands from 160 m to 6 m, using CW, SSB, FT8, and FT4 modes.

QSL via: W9ILY, LOTW, ClubLog OQRS.





## 02. JG8NQJ/JD1 Marcus Island

Take, JG8NQJ, will be active again as JG8NQJ/JD1 from Marcus Island, IOTA OC-073, Minami Torishima, until December 2025. He will operate on HF bands, using CW and FT8 modes.

Latest DX Spots: JG8NQJ/JD1  
QSL via: JA8CJY and LOTW.



02

The island was first mentioned in 1694 by Spanish captain Andrés Arriola, who named it Sebastián López in honor of his admiral. Its location remained unrecorded until 1864, when an American ship named it Marcus Island and fixed its position in 1874, although its claim in 1889 was not recognized.

In 1898, Japan annexed the island and renamed it Minami-Tori-Shima. Between 1902 and 1968, there were disputes with the U.S., including an episode during World War I, until it was finally placed under official Japanese control in 1968, a status that continues to this day.

03

Antarctica is the southernmost continent on Earth, mostly covered by ice and subject to extreme weather conditions. It is the coldest, driest, and windiest place on the planet, with no permanent population, although several countries maintain scientific bases there. Amateur radio activity in Antarctica is highly valued due to its rarity and difficult access, making contacts from there highly sought after by radio amateurs worldwide.

## 03. FT4YM Antarctica

David, F4FKT, will be active as FT4YM from Antarctica between November 2025 and February 2026.

He will operate from several locations:

- FT4YM: Dumont d'Urville Station, Petrels Island, Antarctica
- FT4YM/P: Concordia Station, Antarctica
- FT4YM/P: Little Dome C Station, Antarctica
- FT4YM/P: Cape Prud'homme Station, Antarctica

He will operate on HF bands.







# When the Valley Falls Silent

A Story of Disaster and Preparedness

## When nature calls, being prepared can save lives.

In the shadow of the Sawtooth Mountains, where the Salmon River winds through the wild heart of Idaho, Challis clings to the land like a stubborn root. Ellie Hargrove, a lifelong rancher, knows that rhythm well: sheep, alfalfa, the eternal murmur of the river, and the old amateur radio her husband Tom left behind after he passed away.

That rhythm is shattered on a June Tuesday. A magnitude 7.8 earthquake shakes the valley with primal force: chimneys topple like pines, fissures gape like jagged teeth, and cell towers collapse. Higher up, a colossal landslide crashes into the Salmon River, forming an impromptu dam that completely stops the flow. Challis is cut off in an instant—no power, no signal, no voice.

The few hams in the valley try to communicate, but downed antennas, drained batteries, and lack of coordination stifle their efforts. The only remaining repeater dies that first night. Meanwhile, the natural dam grows like an enraged god. Within hours, pastures and corrals are submerged under a

murky lake; water reaches Ellie's barn, forcing her to drive her sheep up the hills while neighbors struggle to salvage what they can.

Downriver in Salmon, people receive inconsistent rumors: some dismiss the threat, while others cling to routine as if it were a lifeline. Jack Reilly, a mechanic, spends his nights playing cards with his family as the river murmurs a somber warning outside the windows.

For five days, the valley waits. FEMA struggles to reach the area, helicopters battle the wind, and the roads have turned into walls of rock and debris. Ellie and her neighbors patrol on horseback, helping whoever they can, while Walt, the other ham in Challis, tries to broadcast fragments



Photo by: unicomradio.com

## Disaster Awaits the Unprepared

of warnings that barely make it over the peaks.

At dawn on the fifth day, the wall of rock betrays the valley. Ellie watches from a cliff as a sudden groan signals the fracture: the dam gives way in an explosion of black, furious water. A forty-foot wave barrels down the canyon like a rampaging beast, sweeping through Royal Gorge, Elk Bend, and every cabin, bridge, and pine in its path. Within minutes, it reaches Salmon. Reilly's workshop is the first to collapse; houses are ripped from their foundations and float like broken dollhouses. Cars, families, animals—everything is swept away in an unstoppable whirlwind. Over one hundred people lose their lives within hours.

When the roar finally subsides, Salmon is a skeleton of mud and splinters. Ellie survives thanks to the elevation of her ranch, but the devastation leaves gaps impossible to fill: lost neighbors, ruined fields, a torn valley. The National Guard clears paths through the debris, and rescue teams retrieve survivors from trees and rooftops. Investigators reconstruct what happened: the epicenter, the landslide, the five days of grace... and the silence. The silence was the true enemy. The disconnection. The lack of coordination among the amateur radio operators who, with just a bit of organization, might have prevented the downstream tragedy. Ellie places Tom's old radio on the mantel and makes a decision. She becomes a licensed amateur radio operator, just as he always wanted, and promises that no one will ever be left without communication again. In Challis and Salmon, radio clubs spring up like shoots after a fire. They practice every week; they raise antennas, check equipment, and map communication routes.

"W7XXX, test one-two. High ground—always high ground."





Photo by: South West Idaho ARC

## When Everything Fails, Only Preparation Saves

The river eventually runs clear again, but the valley never forgets. Where silence once killed, the voice is now a promise. And everyone learns the hard, simple truth: when modern technology fails, amateur radio—this old relic of wires and faith—is the lifeline that can save lives.

### For Reflection

The previous story is entirely fictional, although this valley is truly susceptible to such an event. The locations are real. The people are a mix of real and fictional characters. I wrote this story in the hope of generating interest in being better prepared for any disaster. The story was published the day before the “Great Idaho Shake Out” drill, on October 17, 2025.

I have been a radio amateur since 1977. During my first decade, I served as an observer for the National Weather Service, reporting on and assisting with several tornado events in the southeastern United States. We have become excessively dependent on our smartphones for communication during disasters. We are repeating the same scenario that occurred in October 2024 in the North Carolina region. We must be prepared for any situation that may arise. If you wait until it happens, it will already be too late.

By: Alan J. Wilson (N0XO)

Email: [n0xo@protonmail.com](mailto:n0xo@protonmail.com)

TX-500MP: Reliable power,  
wherever adventure takes you.

# LAB599 TX-500MP



Photo by: lab599.com

By: SWR Editorial Team

## TX-500MP: The expedition companion you carry in your backpack

Imagine this: you're deep in a remote forest, or descending a rugged canyon, with wind, dust, and maybe rain on the horizon. You need to communicate, but you can't rely on a large base station or abundant power. That's when a radio like the Lab599 TX-500MP stops being a technical luxury and becomes an essential part of your survival, or your passion for radio.

### Design: Toughness at First Glance

The first thing you notice when you pick up the TX-500MP is its solid yet lightweight feel. It features an aviation-grade aluminum chassis, precisely machined, with no pass-through holes that could let in dust or moisture. This casing is not only robust but designed to withstand harsh environments. And when you look at its profile, you realize it's not there to look cool, it's there to perform. Measuring 226 × 90 × 31mm without the battery and weighing just 0.55kg, it's compact enough to fit in a backpack without getting in the way—and with the BP-550 battery attached, it remains easily manageable.



---

## Efficient Power, Long Life

A feature that field operators love: in receive mode, this radio draws only up to 100mA, even with the backlight on. That means hours of listening without constant recharging—a dream when your power source might be solar panels, external batteries, or a small pack in your backpack. It also accepts 9 to 15V DC, giving flexibility to use different types of batteries or portable power sources.

## Operation Designed for Quick Action

This isn't a toy to randomly tune frequencies with spinning knobs. The TX-500MP is designed for those who need programmed channels and effective communication without hassle. It has 100 programmable channels, perfect for predefining frequencies, operating modes, or emergency scenarios. And you don't have to program them only from the radio: PC software makes it easy to organize all those channels efficiently.

## Built-in Automatic Tuner

One of this radio's standout features is its integrated ATU (automatic antenna tuner), which adjusts impedances from 6 to 400 ohms. This is especially useful when operating in the field and improvising with portable antennas: no external tuner is needed. The radio itself "communicates" with your antenna to optimize transmission.



## Frequency Range and Modes: Total Versatility

The TX-500MP isn't limited to just a few bands: in receive mode, it covers 0.5 to 56MHz, giving access to a wide variety of signals and propagation conditions. In transmit mode, it operates from 1 to 30MHz (when using the ATU) and also has output in the 45–56 MHz range. And to cover all modes, it supports SSB, CW, AM, FM, and DIG, thanks to a 32-bit DSP that provides the power to adapt to different types of communication.

## Usability in Tough Terrain

If durability matters to you, this radio does not disappoint. With its sealed design (no exposed openings) and well-protected connectors, it remains reliable under demanding conditions. Its frequency stability is excellent:  $\pm 0.5$  ppm between  $-10^{\circ}\text{C}$  and  $+60^{\circ}\text{C}$ , ensuring it stays accurate despite field temperature changes.

To keep you on track, it features a high-contrast monochrome display (192×96 px) that, while not in color, is perfectly readable even in bright light, and a structure designed to withstand tough conditions.

### **Transmission: Controlled and Reliable Power**

This isn't for competing in power contests, but its output is sufficient for many field situations: 1 to 10 W on most bands, and 1 to 7 W on 45–56 MHz. It also includes over-temperature and antenna mismatch (SWR) protection, preventing damage if something isn't perfectly tuned.

### **Operator-Focused Package**

When you purchase the TX-500MP, you don't just get the radio: the package includes the HSM-500 speaker-microphone with GX16 connector, power and data/CW adapters, a CAT-USB adapter for PC control, and a power cable. If you choose to add batteries, you can also include the BP-550 and its USB-C charging cable.

### **Who This Radio Is For**

- Explorers and backpackers who need reliable communication on remote missions.
- Hams practicing SOTA/POTA (mountain or park activations) who value a lightweight, durable, and long-lasting rig.
- Preppers looking for a realistic off-grid radio system.
- Operators who need a robust radio but don't want to carry a large desktop transceiver.



### **Real-World Considerations**

Of course, nothing is perfect. Some users point out that the channel-based operation (instead of a free VFO) can limit flexibility when exploring new frequencies. The ultra-low power consumption is impressive, but if you transmit frequently at high power, battery life will be noticeable. Additionally, some note that there aren't many HF radios as well-sealed against water and dust as this one, placing it in a very special niche.

### **Final Reflection**

The Lab599 TX-500MP isn't just a "field transceiver"; it embodies a radio philosophy: operational minimalism, maximum efficiency, and physical resilience. It's not for those seeking the most powerful radio, but for those who want a radio that keeps working when everything else fails, and that fits in a backpack without becoming a burden. In an era of disposable gadgets, this rig encourages a different approach: less quantity, more durability; less consumption, more autonomy; less unnecessary sophistication, more real robustness. If you're someone who not only logs amateur radio contacts but truly experiences radio as a way to be prepared for adventures or the unpredictable the TX-500MP could be your ideal companion.



# Signals That Know No Borders

Every transmission is an invisible bridge; even in the midst of a storm, our voices find someone to hear them.





By: Israel Cabrera kp4ax

# THE HAM RADIO OPERATOR'S TOOLS

## THE BOX THAT CHANGED MY LIFE



### A Journey to the Heart of Ham Radio

When I look at my station today organized, lit, alive, I still find it hard to believe it all started with a borrowed toolbox. It was an old little box, rusted at the corners, which my father handed me one afternoon. "Take care of it, because inside there's more than metal," he said. I was 15, barely dreaming of listening to the world. I never imagined that, over time, that box would become the heart of my life as a ham radio operator.

Today, after so many years of CQ calls, projects, antennas in the wind, and early mornings tweaking gear, I can say that every ham needs their own essential tools. I'm not just talking about the physical ones, though those are crucial, but also the little things that let us turn a handful of wires into a voice traveling thousands of miles.

I want to share my story through those tools... the ones that accompanied me during my best contacts, my craziest repairs, and my most thrilling moments in ham radio.



### 1. The Multimeter: The First Teacher

The first serious piece of equipment I got my hands on was a yellow multimeter that looked bigger than my arm. I didn't know how to use it, but I wanted to learn. My father taught me to measure voltages like someone teaching a child to fly a kite.

That multimeter saved me countless times...

When my first radio wouldn't turn on, when I blew a fuse by connecting the wrong thing, when I built my first homemade power supply. I learned that a multimeter isn't just a tool... it's a silent mentor.

Every ham needs one. And not a toy—one you can truly rely on.





## 2. Allen Keys, Screwdrivers, and Pliers: Reliable Friends

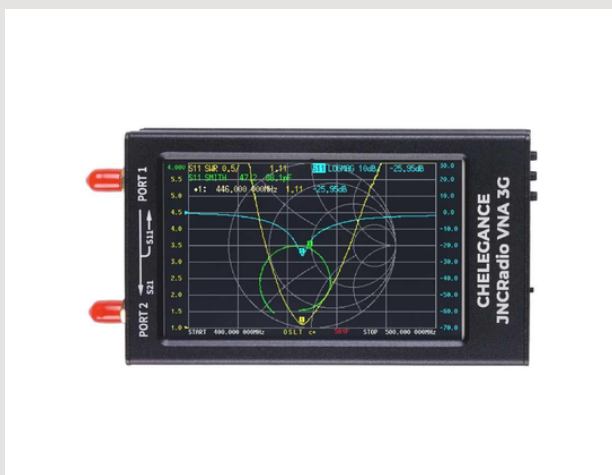
With these tools, I built my first hand-made Yagi antenna. It was a disaster... but it worked. Every tightened screw, every clamped bracket, every bent wire... all of them were my entry into the world of antennas. I'll never forget installing my first tower: my hands were shaking, but my tools never let me down.

Every ham who deals with antennas, even once a year, needs a good set of hand tools. They save time, frustration, and screws lost in the grass.

## 3. The NanoVNA or Antenna Analyzer

The day I truly understood what "tuning" meant. I can't deny that when the NanoVNA first appeared, I thought it was a complicated toy. That changed the day I connected a 40-meter vertical antenna that refused to work. Watching the SWR graph drop magically as I trimmed a few centimeters was a revelation. —"So THIS is what perfect tuning looks like!"—I thought.

The analyzer became my best ally in antenna setup, and even today it's an irreplaceable tool. Modern amateur radio simply doesn't make sense without one.



## 4. Coax Cables, Connectors, and Vulcanized Tape: The Invisible Heroes

They're not glamorous. You don't show them off on social media.

But when one fails... everything fails! I learned to crimp PL-259 connectors in light rain, holding a lamp in my mouth while the wind slammed my back. I don't recommend it, but I learned two things:

- A bad connector can ruin the best equipment.
- Vulcanized tape is black magic that works.

Every ham should know how to crimp, seal, and protect their cables.

## 5. The Soldering Iron: The Creator's Brush

My station is full of little things I made myself: adapters, cables, repairs, filters, and a couple of circuits I'm still not sure work perfectly—but I made them with care. All thanks to the soldering iron.

Soldering is an art every ham should master. The smell of solder is the scent of learning.





## 6. The Notebook: The Ham's Secret Diary

It may sound old-fashioned, but I still use a notebook.

There I jot down:

- Memorable contacts
- Configurations I must not forget
- Weird antenna ideas
- Problems and solutions
- DX dreams

Over the years, it has become a life diary. If amateur radio is an adventure... my notebooks are the map.

## 7. The Most Powerful Tool: Curiosity

No screwdriver, analyzer, or soldering iron surpasses this tool. Curiosity drove me to experiment, build, fail, try again, contact impossible stations, and teach others. Curiosity is the spark behind every memorable QSO and every antenna raised. When a ham stops being curious... they stop growing.



## Conclusion:

The box stays with me

That rusty old box no longer exists, but what I learned from it has never disappeared. Today I have my own tools, organized and modern, but sometimes I close my eyes and still see myself as that boy, with his first multimeter and a huge dream of listening to the world.

And that reminds me that tools are not just objects.

They are doors.

They are memories.

They are battle companions.

They are what turns a ham into a creator, a spectrum explorer, an air artisan.

So, if you're just starting out, get your tools. If you've been at it for years, take care of them.

And if, like me, you learned with a borrowed box... you know that no matter how much we change, the essence remains the same:

An amateur radio operator is, above all, a builder of dreams on the airwaves.

73,

Photos from: [dxengineering.com](http://dxengineering.com)





## ON THE AIR

# AMATEUR RADIO CONTESTS THIS MONTH

### ARRL 10-METER CONTEST

Dates: December 13–14,  
00:00 – 23:59 UTC  
Modes: CW and Phone (SSB)  
Participants: US, Canada,  
and DX stations  
Exchange: RST + state/  
province (US/Canada) or  
serial number (DX)  
Note: Up to 36 hours of  
operation allowed;  
categories by power and  
station type.

### RAC CANADA WINTER CONTEST

Date: December 29, 10:00 –  
22:00 UTC  
Bands: 80 m to 10 m  
Modes: CW and SSB  
Participants: Young  
operators ≤25 years old  
Note: Ideal for novice  
operators; encourages youth  
participation and  
international contacts.

### DARC XMAS CONTEST

Date: December 26, 08:30 – 10:59 UTC  
Modes: CW and SSB  
Bands: 80 m and 40 m  
Participants: Mainly European stations  
Note: Short Christmas contest, ideal  
for quick contacts and enjoying the  
festive atmosphere.

### RAC CANADA WINTER CONTEST

Date: December 28, 24 hours  
Bands: 160, 80, 40, 20, 15, 10, 6, and 2 m  
Modes: CW and Phone  
Participants: Canadian hams and DX  
stations  
Note: Long contest, allows operation  
on multiple bands and modes,  
encourages international contacts.

# FESTIVE FREQUENCY



# Emergency Communications: From Spark-Gap Transmitters to Satellite Phones



## Modern Tools, Timeless Service

By Lloyd Colston, KC5FM

For decades, the Voice over Internet Protocol Weather Network (voipwx.net) has played a vital role in emergency communications, linking EchoLink and the Internet Radio Linking Project (IRLP) to deliver Skywarn weather reports directly to station WX4NHC at the National Hurricane Center. Just as every other aspect of amateur radio has evolved, so too have emergency communications — from the spark transmitters aboard the Titanic to today's digital and hybrid systems that connect amateur radio operators around the world.

## The World in Your Pocket

Modern amateur radio has redefined mobility and resilience. A great example is the OpenSpot 4, often described as “the world in your pocket.” This small but powerful hotspot allows operators to connect a handheld Fusion transceiver via Wi-Fi, linked to a cellphone, enabling smooth communication from the road or even across continents.

Similarly, apps like DroidStar allow operators to connect directly to multimode digital voice networks — Fusion, P25, AllStar, and D-Star — in states such as Oklahoma, Illinois, and Alabama, all from a smartphone.



Photo by: berkut13.com



After the shutdown of Hamshack Hotline, new systems such as Hams Over IP, AmateurWire, and the Patriot Radio Club's “BatPhone” emerged to fill that gap. Even amateur radio operators aboard cruise ships can now make VOIP calls using the ship's Wi-Fi without interfering with onboard systems — and without needing the captain's permission to “call home.”

## Beyond Voice: Winlink, APRS and More

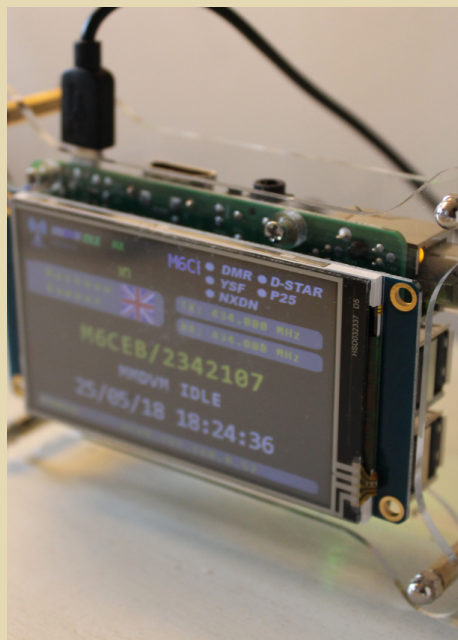
That same phone in your pocket can do much more. With Winlink, licensed operators can send and receive emails — including attachments — from anywhere



on Earth. Automatic Packet Reporting System (APRS) applications, available on Apple and Android platforms, allow users to share position, weather, and short messages in real time. The OpenSpot and similar devices make sending APRS messages easier than ever, seamlessly linking RF and internet networks.

“That’s Not Real Radio!” Or Is It?  
Some traditionalists may still say, “That’s not real radio!” But let’s remember two essential truths:

1. Each of these systems still requires a valid amateur radio license. Unlicensed users are not permitted to connect.
2. Every communication method has vulnerabilities. Hurricanes and storms can damage towers and antennas, which is why prudent amateur radio operators prepare. Many take down their antennas before strong winds arrive, secure multiple power sources for HF radios and mobile devices, and regularly test all equipment before disaster season.



Skywarn Recognition and Service Every December, Skywarn Recognition Day honors the collaboration between the National Weather Service (NWS) and the amateur radio community. During this annual event, hams around the world contact as many Weather Forecast Offices (WFO) and Skywarn volunteers as possible, celebrating those who watch the skies to protect their communities.

You can learn more about how to participate at [weather.gov/skywarn](http://weather.gov/skywarn).

## Looking to the Future

Amateur radio has traveled an incredible path – and the journey continues. New technologies like Meshtastic and M17 are pushing the limits even further. The latest satellite-enabled handheld radios allow operators to maintain communication from

virtually anywhere on Earth. Whether through HF, digital modes, VOIP, or satellites, amateur radio continues to prove its timeless value, connecting people, saving lives, and standing ready when everything else fails.

## About the Author

Lloyd Colston, KC5FM, is a retired emergency management director and an active member of the amateur radio community. He participates in SunflowerNet.us, a multimode digital voice initiative, and is a member of the Quarter Century Wireless Association (QCWA), the American Radio Relay League (ARRL), and the Christian Amateur Radio Fellowship (CARF.net), among other clubs in Kansas and Oklahoma.

He can be found on FM on 10, 6, 2, and 440 meters, or on SSB on 160, 80, 40, 20, 15, and 10 meters. He is a frequent participant in emergency nets and often operates through RemoteHams.com remote stations across the United States.



*The Nostalgia Nook*

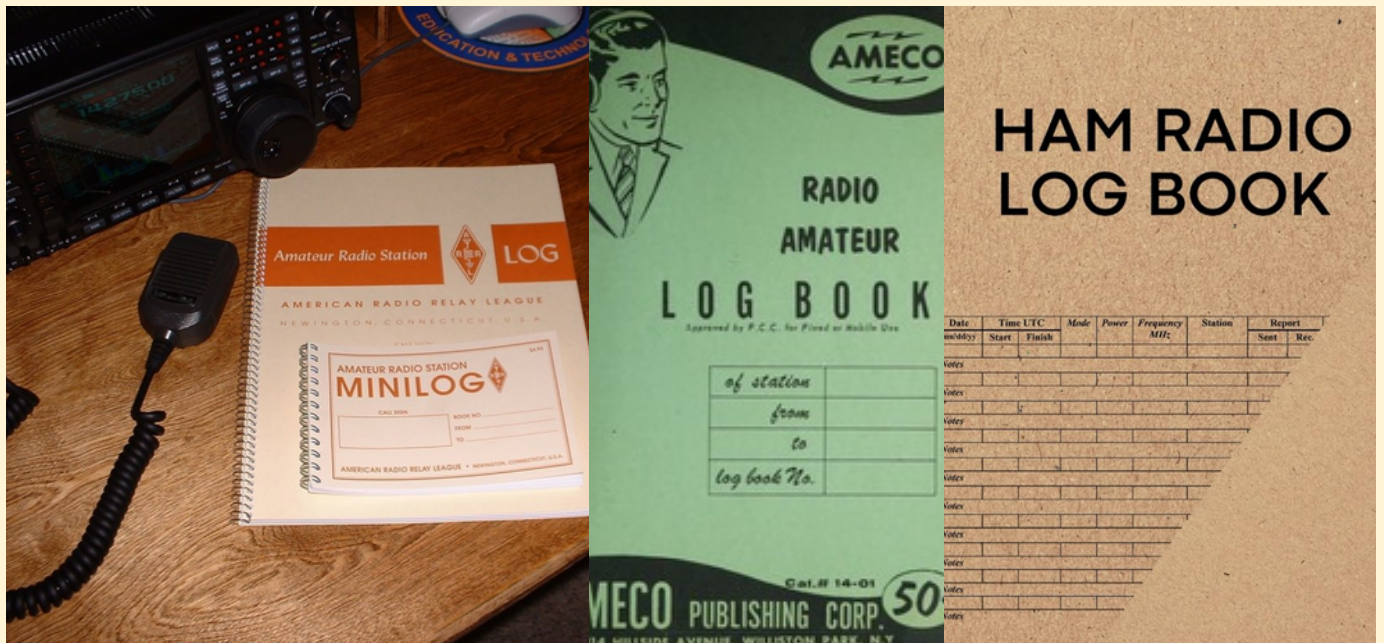
## The Logbook of Every Station

In the early days of amateur radio, before digital screens and databases, the heart of every station was a simple paper logbook. Placed next to the key or microphone, it was as essential as the transmitter itself. Every contact—whether a local VHF chat, a nighttime DX connection, or a friendly city QSO—found its place written in neat handwriting, often with ink smudges and perhaps a coffee stain on the page.



Those entries told more than just call signs and signal reports; they told stories. The thrill of confirming a new country, the pride of a flawless CW exchange, or the frustration of a fading signal—all were captured in those lines. Many operators added personal notes, small sketches, or weather conditions, turning their logs into time capsules of amateur radio history.

Today, those books rest on dusty shelves, pages yellowed but memories alive. They have been replaced by modern electronic logging software, essential for contests, DXpeditions, and special events. Yet for many veteran hams, the feeling of a pen gliding over paper remains unmatched: a tangible link to the golden era of amateur radio, when every contact was not only heard but also written down, remembered, and cherished.



By: SWR Editorial Team

## The Nostalgia Nook



# D

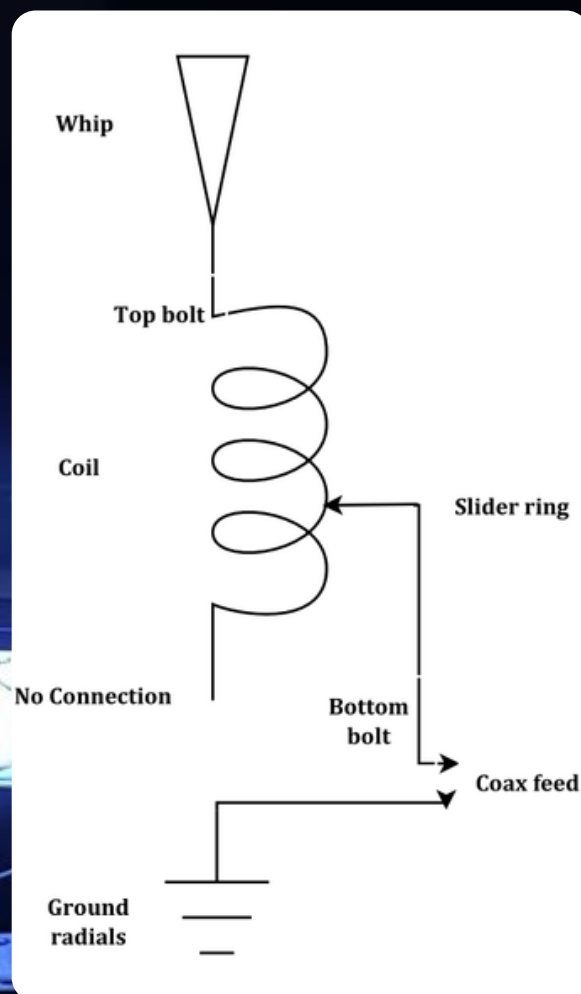
# IY VERTICAL ANTENNA

## RECIPE FOR A GREAT PORTABLE ANTENNA FROM 6 M TO 80 M

By: Pablo Sabbag VA3HDL

## INGREDIENTS

- 2x 3/8" 24 nuts, bolts, washers, and one coupler
- 1-1/4" Schedule 40 PVC pipe
- 2x Caps for the ends
- 1x 2" coupler
- 50' (15m) 16 GA (1.4mm) Galvanized wire
- 50' (15m) 16 GA (1.4mm) Weed trimmer line
- 17ft (5m) whip or cable for the vertical radiating element
- 3/8" stud to SO-239 mirror mounting bracket
- Any tripod
- Lots of any wire for the ground radials



## PREPARATION

1. Make two small holes on the pipe, close together, run the wire and the trimmer line through and attach to a washer on the inside of the pipe
2. Coil both the wire and the trimmer line in parallel until consume the length of the wire
3. Tape the end firmly and make 4 small holes to lock the wire and trimmer line in place
4. Attach to top wire of the coil to the top bolt
5. Make a slider ring with the 2" coupler
6. Attach a piece of wire from the bottom bolt to the slider ring
7. Take it outside and try it!

# D

# DIY VERTICAL ANTENNA

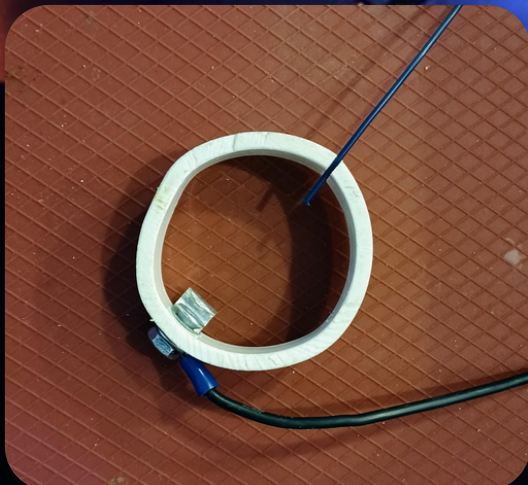


Coiling the 16 GA x 50' (15m) galvanized wire and the weed trimmer line (same diameter)



Attaching the slider ring cable to the bottom feed point

Slider ring build details



Completed loading coil



# D

# DIY VERTICAL ANTENNA



Mirror mount 3/8 24 stud to SO239 connector



10 lb dumbbell for stabilization



4 bundles of 6 ground radials each 33' (11 m) spread evenly in 360 degrees



Starting deployment on the field



Detail of the top coupling bolt (3/8 24)



# D

# DIY VERTICAL ANTENNA



Deployment completed in 20 minutes or less

With every turn of wire and every adjustment, you're not just building an antenna—you're connecting miles of air with creativity, passion, and the spirit of amateur radio. What you create with your hands becomes your voice to the world.

Photos and information from: [www.va3hdl.com](http://www.va3hdl.com)



# Why the 70-Year-Old Wattmeter Still Reigns as the King of the Airwaves

Photo by: birdrf.com



Photo by: obtainsurplus.com

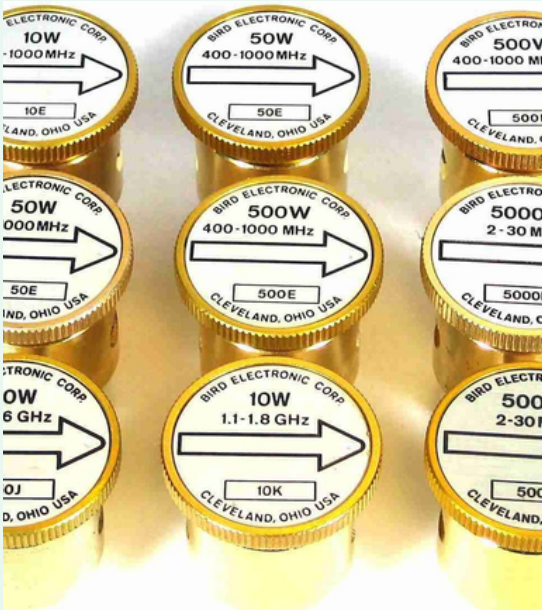
## Bird 43

By: SWR Editorial Team

Since its debut in the 1950s, the Bird 43, also known as the “Thruline Wattmeter”, has earned a legendary place in the world of RF measurement. Seventy years after its introduction, it remains a fundamental tool for both amateur radio operators and professional engineers. What’s its secret for standing the test of time and staying relevant in a world dominated by digital sensors and ultramodern equipment? Here’s the answer.

### 1. Origins and Evolution

- The Bird 43 was introduced by J. Raymond Bird in 1952, at a time when measuring RF power was not as straightforward as it is today.
- Before its invention, technicians estimated RF power by measuring the transmitter’s input energy (such as AC consumption) and then calculating an efficiency.
- Its design was revolutionary: it required no batteries or external power; it operated solely with the RF signal passing through it.
- Since then, its basic architecture has hardly changed. Its analog design, robustness, and modularity have allowed it to remain relevant.



## 2. How Does It Work?

- The Bird 43 is an inline meter: it connects directly into the 50-ohm coaxial transmission line and measures both forward and reflected power.
- It uses an interchangeable “element” (also called a “slug”) to match different frequency and power ranges.
- To switch between forward and reflected power, you simply rotate the element 180 degrees.
- The meter is fully analog: a needle indicates the measured power, providing an immediate reading with no digital processing.

## 3. Robustness and Durability

- Its metal casing and needle movement are built to withstand shocks and harsh conditions.
- The modular design (with interchangeable slugs) allows it to be adapted to different needs without replacing the entire meter.
- It has been used for decades in demanding environments: military communications, base stations, and airports.
- According to Bird, the Model 43 is still part of their current “power measurement methods” lineup, demonstrating a strong commitment to its legacy.

## 4. Accuracy and Reliability

- It offers an accuracy of  $\pm 5\%$  of full scale (depending on the element used).
- Its insertion loss is very low (causing minimal disturbance to the measured line), making it ideal for precise measurements.
- Even with the rise of digital sensors (USB, microprocessor-based), the Bird 43’s analog approach provides a level of trust and immediacy in readings that is hard to replicate for simple tuning or diagnostic tasks.

Photo by: world.taobao.com





## 5. Its Place in History and Today

More than a million units have been sold worldwide, according to Bird, a testament to its enduring success.

In the aviation industry, for example, it is still used to check transmitters and adjust antennas.

In the amateur radio community, the Bird 43 is nearly an eternal classic. Many operators keep it as a reference tool to compare with more modern meters.

There is a "P" version of the Model 43 (Bird 43P) that adds peak measurement capability for modulated signals like AM or SSB, while maintaining the same analog robustness.

## 6. Why It Still Reigns

**The reasons for its reign can be summarized in several key points:**

- Reliable simplicity: no complex buttons, no batteries, just connect and measure.
- Modularity: slugs can be swapped for different frequencies and power levels.
- Durability: built decades ago, many still function perfectly.
- Sufficient accuracy: for many radio applications, ultra-precise digital accuracy isn't necessary; the Bird provides just enough.
- Legacy and trust: technicians rely on it because it has proven effective for generations.

## Conclusion

The Bird 43 is not just a classic instrument—it is a living legend. Its combination of analog precision, modularity, and mechanical robustness has achieved what few devices can: transcending entire technological generations. While many marvel at digital sensors, the Bird 43 remains there—reliable, simple, and ready to measure RF power as it has for over seventy years. For amateur radio operators, engineers, maintenance technicians, or any RF enthusiast, the Bird 43 is more than a tool: it is a symbol. And its reign over the airwaves will likely continue, as long as there is someone who values what is proven, reliable, and well-built.



Photo by: birdrf.com

## What is Winter Field Day: A Journey of Radio and Connection

Imagine a January weekend: the crisp air, the hum of antennas being deployed, and a ham radio operator adjusting their equipment while calling out to the world: “CQ, CQ, Winter Field Day.” That scene captures the spirit of one of the most exciting events in amateur radio: Winter Field Day.

### A Challenge for Every Station

Winter Field Day (WFD) is an annual event that brings together amateur radio operators from around the world to practice portable communications under real-world conditions. It takes place on the last full weekend of January, when every contact becomes even more meaningful.

For 24 hours, participants operate from the field, shelters, cabins, or open spaces, using HF, VHF, UHF, and digital modes. They face challenges such as improvising antennas, operating with alternative power sources, and maintaining efficient communication.

### Connecting Passion and Community

The beauty of Winter Field Day is that your experience doesn't depend on your skill level: you can participate solo, with your family, or with your club. Many groups open their sites to the public, sharing enthusiasm and teaching new amateur radio operators. More than a technical exercise, it's an opportunity to learn, collaborate, and experience the magic of ham radio. Every QSO becomes a bridge connecting operators and communities, reminding us that even in difficult times, a signal can change everything. Participating in Winter Field Day allows you to learn and practice, improve emergency preparedness, tackle technical challenges, and enjoy camaraderie by connecting with operators around the world. Each contact becomes a story traveling across miles of air and energy. This event celebrates resilience, creativity, and passion for amateur radio. If you've ever dreamed of turning on your radio and talking to someone on the other side of the globe, this is your moment: raise your antennas and let your voice cross borders.



# WINTER FIELD DAY



By: Yanira Maldonado WP4QOE

# Powerful Voices

Women Who Made History in Amateur Radio  
*Fourth in a Series*



Faith Hannah Lea, KD3Z: Youth, Technical Excellence, and Global Leadership in Amateur Radio

A young operator connecting continents and generations through the airwaves

From Palm Coast, Florida, Faith Hannah Lea (KD3Z) has emerged as one of the world's most outstanding young amateur radio operators. Licensed at just 10 years old, she has achieved milestones that many veteran operators can only dream of.

## A Meteoric Rise in Amateur Radio

Faith Hannah earned her Technician license in December 2014, followed by her General license just two weeks later, and her Extra license two months after that. Her passion for communications led her to join Dave Kalter's Youth DXpedition team in 2016, operating from Saba Island (PJ6). There, she set a world record for satellite contact distance on the SO-50 satellite.

Every call, every QSO, demonstrates that the passion for the air knows no gender.



Find Out More about Hans' Kits at

## Education and Leadership:

At 15, Faith Hannah completed an associate degree at Daytona State College and is currently pursuing a double major in Molecular Biology and Business Administration at Stetson University, maintaining a 4.0 GPA. She has been awarded significant scholarships, including a \$25,000 grant from the Amateur Radio Foundation and a \$16,000 award from the "Voice of Democracy" essay contest.

## Community Engagement and International Presence:

Faith Hannah has participated in numerous activities, including the "Youngsters on the Air" program in South Africa, and has served as a net control operator for the Amateur Radio Emergency Service (ARES) during hurricanes in Florida. Alongside her family, she runs the YouTube channel HamRadioWorld, promoting amateur radio among youth and diverse communities.

## Valerie Hotzfeld, NV9L: The Voice That Crosses Storms

In the universe of amateur radio, where every signal carries a story beyond the horizon, few voices resonate with as much strength and purpose as Valerie Hotzfeld, NV9L. Her name has become synonymous with operational excellence, community commitment, and technical leadership, embodying what it means to be a truly "powerful voice" in our hobby. Valerie entered the world of DXing and contesting almost by accident, but once she discovered the magic of HF, she found the perfect stage for her energy, discipline, and analytical focus. Her skill in navigating pile-ups, coordinating complex operations, and maintaining a clear, confident presence on the air quickly led her to become



one of the best DXers in the world. But Valerie's impact goes far beyond the microphone. During Hurricanes Harvey and María, her work in emergency communications brought connection and hope to isolated communities, from hospitals to family reunification centers. Her voice became a bridge when systems failed.

As an advocate and educator, she has opened the doors of amateur radio to hundreds of people. On Ham Nation and through her videos, she transforms complex concepts into accessible tools, inspiring especially new YLs to discover that this world also belongs to them.

Valerie, NV9L, doesn't just operate radios: she inspires, uplifts, and humanizes. Her voice continues to cross borders and storms, reminding us that a signal on the air can make all the difference.



Photo courtesy of DC



**Between Snow and Sky, the Signal Endures.**





# FUN WAVE



"This says a lot about society."

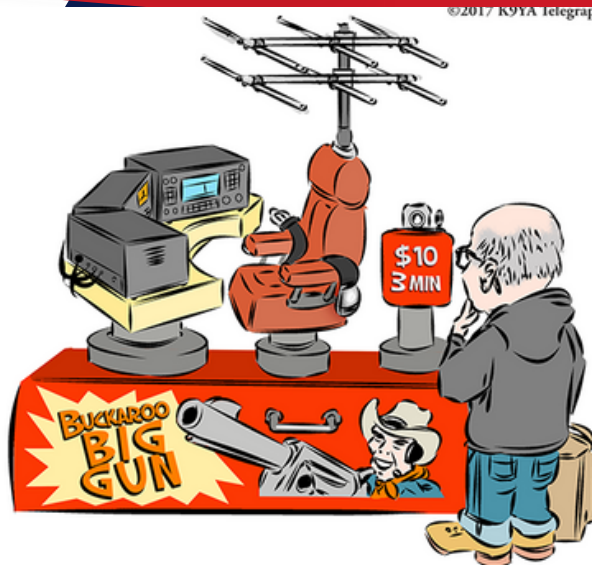
## QSL with Humor

Why is a ham radio operator so balanced?  
— Because they always stay "grounded."

— I sold my radio to make my wife happy.  
— Did it work?  
— Not sure... I'm still deciding which radio to buy with the cash.

— What's a ham radio operator's worst nightmare?  
— Having bad "vibes."

**HAM RADIO**  
THE ONLY HOBBY WHERE A  
'PILEUP'  
IS A GOOD THING!



With every contact, a ham radio operator gains friends... and a few guaranteed laughs.



Yesterday's  
Technology,  
Today's  
Usefulness

# IS THE ICOM IC-7000 STILL RELEVANT TODAY?

Photo by: IZ1ESM



By: SWR Editorial Team

*A Classic  
That Still  
Stands Strong*



Its detachable front panel quickly made it the king of mobile installations, especially in vehicles where space was limited but the desire for DX was high.

It wasn't uncommon to see expeditioners, early park activators, and emergency stations adopt it as their workhorse. In many leagues and clubs, the IC-7000 became "the radio everyone wanted."

When Icom released the IC-7000 in the mid-2000s, the amateur radio community welcomed it as a true "radio of the future." It was compact, powerful, versatile, and offered an explosive combination for its time: all the major bands in a single rig (HF, 6 m, 2 m, and 70 cm), a highly advanced digital DSP for its era, and a color TFT display—something that back then was a luxury reserved for high-end models. For many mobile and portable operators, this radio represented freedom: a single device that could do it all. And it wasn't just what it offered; it was how it offered it.

## An Impact Hard to Match

The IC-7000 redefined the "compact multiband" category. As the successor to the popular IC-706, it arrived with features that once seemed like science fiction:

- 100 W on HF
- 50 W on VHF
- 35 W on UHF
- Programmable IF DSP filters
- Digital noise reduction
- Automatic notch filter
- TX/RX equalizer
- Robust yet elegant design

For operators transitioning from the analog world to digital, the IC-7000 was a smooth and powerful gateway.



While it's not a cutting-edge radio, the Icom IC-7000 still proves that smart design, genuine versatility, and robust construction can keep a classic relevant in a world dominated by SDRs and flashy displays.



Ready for the Road, the Shack, or the Field.

## The Test of Time: How Relevant Is It Today?

More than ten years have passed since its release, and technology has advanced by leaps and bounds. Today, we live in the era of SDRs, touchscreens, built-in waterfalls, and USB connections that make digital modes easy with a single cable.

With that in mind... can a radio like the IC-7000 still be relevant? Surprisingly, yes. Of course, it has limitations. It's not an SDR, it doesn't have a built-in waterfall or USB interface, and it can run hotter than desired under heavy use. But what it still offers is enough to keep it on the list of useful and respected rigs.

## How Does It Compare to Modern Radios?

The Icom IC-7000 still retains several strengths that keep it relevant: it offers true versatility by combining HF, VHF, and UHF with full power in a single rig; its DSP, while not a modern SDR, remains very effective; its robust construction has earned it a reputation for durability; and its large user community ensures support, spare parts, and resources. Its receiver continues to deliver competent performance for casual DXing, mobile operation, or POTA activities.

Compared to today's radios, which excel in dynamic range, phase noise, waterfall displays, and digital mode ease, the IC-7000 is technologically behind. Yet it maintains something unique: its "all-terrain" hybrid character. In a market where many rigs are specialized, the 7000 remains a practical and reliable choice for those seeking a single radio that does it all or a rugged travel/back-up transceiver.

In conclusion, while it is not a modern radio, its smart design, balanced power, and true versatility keep it as a functional classic that still has a place in many operators' shacks.





THE RADIO EVERYONE  
LOVES... AND FEARS

Photo by: baofengradio

# Baofeng: Revolution or Risk in Amateur Radio?

By: Julio Mercado WP4PUX

When it comes to amateur radios, it's impossible to ignore Baofeng. This Chinese brand arrived offering cheap, compact, and seemingly miraculous radios that put amateur radio within reach of almost anyone. But not everyone is convinced: for some, these radios represent a risk; for others, a revolution that democratized the hobby.

This technique is very efficient, especially when there isn't enough horizontal space, and it allows for maintaining a reasonable bandwidth—much better than simply coiling the wire at the end of a dipole.



Photo by: baofengradio

## THE RADIO THAT DEMOCRATIZED THE HOBBY... AND SPARKED DEBATES.

### Advantages: Democratizing Radio... and Controversy

Before Baofeng, owning a decent handheld radio could cost hundreds of dollars. Radios like the UV-5R, for under \$50-\$70, offered:

- Dual band (VHF/UHF)
- Up to 5 W output
- Rechargeable, compact battery
- Channel memory and basic scanning

For many, this was a breath of fresh air: for the first time, beginners could experiment without spending a fortune. The community grew explosively, tutorials, forums, videos, and social media groups. Baofeng opened the door of amateur radio to millions of new users.

But here comes the controversy: some veteran operators criticize the easy access, arguing that a cheap radio can encourage irresponsible use, illegal interference, or regulatory problems. In short: it democratized radio... but also made it potentially risky for those who don't know what they're doing.

### Disadvantages and Criticisms: Too Cheap to Be Good?

- **Limited build quality:** flimsy plastic and small buttons. Doesn't compare to Yaesu, Icom, or Kenwood.
- **Modest sensitivity and selectivity:** in urban environments crowded with signals, transmissions can be missed or interference generated.

- **Frequent Illegal Use:** Many operate without a license on unauthorized frequencies, giving the hobby a bad reputation.
- **Questionable Durability:** Drops, moisture, or heavy use can cause them to fail quickly.

For some, these limitations serve as a reminder that not everything cheap is good, and that Baofeng radios are a double-edged sword: accessible, but potentially problematic if used without proper knowledge.

### A Controversial Experience

I remember the first time I used a UV-5R on a hike: it allowed me to coordinate the group and tune into local stations. Lightweight, compact, and with a long-lasting battery... it seemed perfect. But I also noticed its limitations: weak signals were lost, the initial programming was tricky, and I suddenly wondered if inexperienced users could inadvertently cause interference. That moment was revealing: an inexpensive radio can be both an ally and a risk.

### Conclusion: Revolution or Problem?

The Baofeng is undeniably a phenomenon. It made amateur radio accessible to millions, created massive learning communities, and enabled economical experimentation. But we cannot ignore the criticisms: illegal use, interference, and limited build quality raise concerns among veteran operators. The question that remains is clear: is Baofeng the future of amateur radio, or a risk disguised as an opportunity? The answer depends on how each user handles it.

Attached is a link to a video where NP4ET elaborates further on the topic: [video](#)



**Alone in the snow, but never disconnected, the radio connects the impossible.**





# Radio Club Los Molinos of Villa Alemana Shines at the Largest Collectors and Hobbies Fair in the Valparaíso Region: “Hobby Planet”



## The Magic of Classic Technology

The event also served as an educational platform. Several young university students were inspired, particularly while exploring the composition of the satellite antenna on display, fostering a deeper interest in the satellite communications offered by amateur radio.

Finally, the Vice President of the Radio Club, Álvaro Torres Allen CE2WJ, expressed his deep gratitude for the commitment and active participation of the members. During both intensive days, members enthusiastically presented technical and operational topics in amateur radio, reinforcing the institution's goal of continuing to bring amateur radio closer to the entire community.

The turnout was massive, including families, young people, and seniors. The public recognized amateur radio operators as active and essential collaborators within the community, highlighting their vital role in maintaining telecommunications during disasters, especially when called upon by authorities.

## Villa Alemana, Chile

By: Radio Club Los Molinos de Villa Alemana

In response to the joint invitation from Hobby Planet Producciones and the Villa Alemana Department of Culture, the Radio Club Los Molinos of Villa Alemana CE2CQ actively participated on October 25 and 26, 2025, in the largest collectors and hobbies fair in the Valparaíso Region, an event that attracted thousands of families and enthusiasts.

The Chilean Radio Club's booth became a focal point of technological and heritage interest. The amateur radio operators set up a variety of equipment and antenna systems, with particular emphasis on the flawless operation of valve (vacuum tube) radios.







## Sparking Interest in Radiocommunications

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# M17

## THE DIGITAL FUTURE WE ARE BUILDING TODAY



By Abimael Padró, KP4RY

Since I discovered digital modes, I've had the feeling that we are living in a golden age of amateur radio. Every year something new appears, some technology that pushes us to learn, experiment, and evolve. But very rarely does a project emerge that not only adds another tool... but changes the rules of the game. That's exactly what M17 is doing. If you've never heard of the M17 protocol, get ready, because this is one of those inventions born with a revolutionary spirit. And best of all: this revolution comes from us, from the amateur radio community, not from a corporation. The Need for a Truly Free Mode

**For years, I have enjoyed commercial digital modes:**

D-STAR, DMR, Fusion. They all work, they all have their charm... but they all share one problem: they rely on proprietary codecs like AMBE. That means that, even if we love experimenting, a large part of the system is a black box.

As a digital enthusiast, that limitation has always bothered me a bit. Why can't we have a modern, fast, functional, and completely open system? Someone else thought exactly the same. And thus, M17 was born.



### What Is M17? In My Words...

M17 is a digital communication protocol designed by hams, for hams. No patents, no secrets, no hidden licenses. Everything is published, documented, and available to anyone who wants to learn or build. It uses Codec2, a completely free voice codec developed specifically for low-bitrate communications. That means M17 doesn't rely on closed technology. And for me, that changes everything.

M17 is:

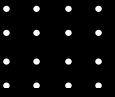
- Digital voice
- Data
- Telemetry
- IP connectivity
- Low-latency communications
- An open lab for innovators



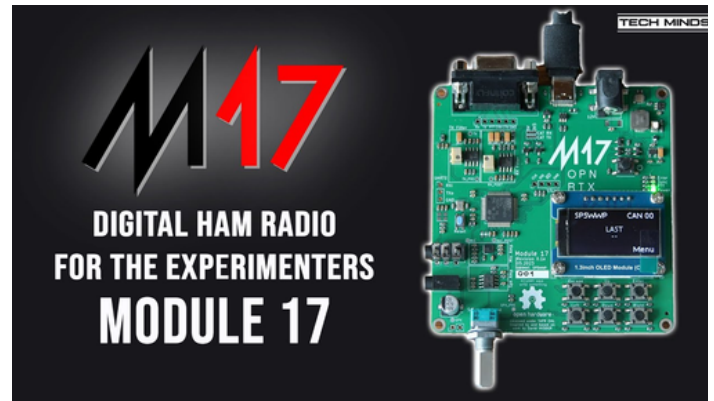
This protocol is like a blank canvas where every operator, programmer, or maker can paint.







# M17



## A Protocol That Grows Because It's Powered by the Community

One of the things that fascinates me most about M17 is the energy of its community. I'm not just talking about forums or idea-filled chats—which exist—but about developers building open hardware, designing their own hotspots, and creating software without relying on a manufacturer. Hotspots, repeaters, and platforms like Pi-Star already support M17. It's just a matter of powering up your rig and going on the air. We're not talking about an alpha-phase experiment here. We're talking about a real, growing ecosystem.



## And How Does M17 Sound?

In my tests, the voice quality is surprisingly clear. The modulation is robust. The latency is minimal. Perfect? No—but no digital mode is perfect in its infancy. Yet... with M17 you can feel that raw potential, that “something” that tells you: “this is going to go far.”

## Why M17 Matters Today, Not Tomorrow

M17 represents a historic opportunity:

- We are part of its development.
- We can influence its evolution.
- We can contribute with code, hardware, or simply by using it.
- We can create fully open networks, without relying on any company.

For those of us who love digital modes, M17 is not just another protocol. It's a reminder that amateur radio is a space to think, create, invent, and share.

In a world where so many systems are closed, M17 opens doors.

## My Invitation

If you're someone who enjoys every new mode, who gets excited by command lines, hotspots, field tests, binary packets, and the smell of solder... then M17 is for you.

Download it.

Try it.

Connect to a reflector.

Build something.

Explore.

Digital modes have always been the bridge between classic amateur radio and the future.

M17, however, is the moment when we take that future into our own hands.

See you on the air.





# HAM RADIO ZONE

Tune In, Transmit, and Receive: The Magic  
of Radio Is Also Christmasy.

The Costa Blanca Amateur Radio Cultural Association (ACRACB) is organizing its ACRACB-25 Christmas Diploma from 07:00 UTC on December 18 until 21:00 UTC on December 21, 2025. The event is open to amateur radio operators and SWLs worldwide across multiple bands (HF 20/40/80 m in voice, VHF, DMR, VOI, CB, and PMR446), with points awarded per contact depending on the mode. Diplomas can be downloaded from their website or printed for a fee for those with the highest participation.



The club HamRadioDx.es is organizing a Christmas event from December 10 to 25, 2025, featuring special callsigns, bronze, silver, and gold diplomas, cash prizes, QRP channel operations, and a final raffle broadcast on YouTube. Amateur radio operators from around the world are invited to participate and celebrate the season with radio.





# SWR

